

Single Phase Silicon Bridge Rectifier

$V_{RRM} = 50\text{ V} - 400\text{ V}$

$I_O = 15\text{ A}$

Features

- High efficiency
- Silicon junction
- Metal case
- Types from 50 V to 400 V V_{RRM}
- Not ESD Sensitive

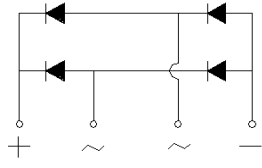
Mechanical Data

Case: Mounted in the bridge encapsulation

Mounting position: Hole for #10 screw

Polarity: Marked on case

KBPC-T/W Package



Maximum ratings at $T_c = 25\text{ }^\circ\text{C}$, unless otherwise specified (KBPCXXXXT uses KBPC-T package while KBPCXXXXW uses KBPC-W package)

| Parameter | Symbol | Conditions | KBPC15005T/W | KBPC1501T/W | KBPC1502T/W | KBPC1504T/W | Unit |
|---------------------------------|-----------|------------|--------------|-------------|-------------|-------------|------------------|
| Repetitive peak reverse voltage | V_{RRM} | | 50 | 100 | 200 | 400 | V |
| RMS reverse voltage | V_{RMS} | | 35 | 70 | 140 | 280 | V |
| DC blocking voltage | V_{DC} | | 50 | 100 | 200 | 400 | V |
| Operating temperature | T_j | | -55 to 150 | -55 to 150 | -55 to 150 | -55 to 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | | -55 to 150 | -55 to 150 | -55 to 150 | -55 to 150 | $^\circ\text{C}$ |

Electrical characteristics at $T_c = 25\text{ }^\circ\text{C}$, unless otherwise specified

Single phase, half sine wave, 60 Hz, resistive or inductive load

For capacitive load derate current by 20%

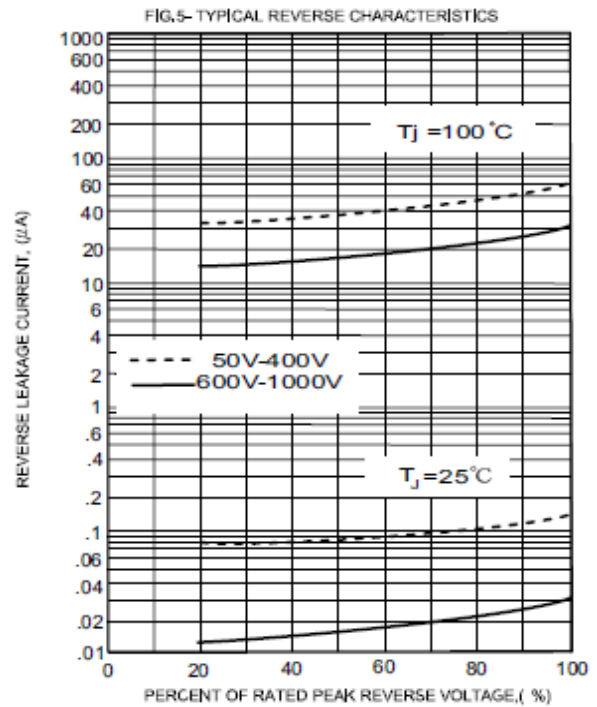
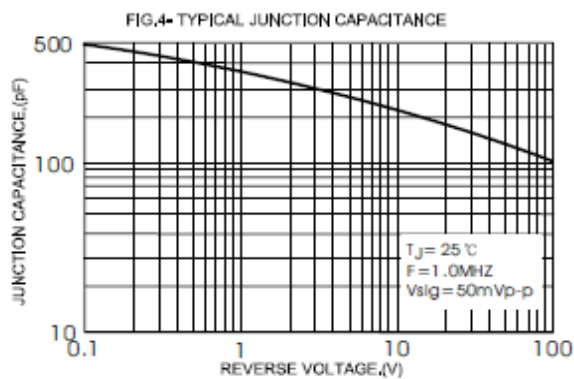
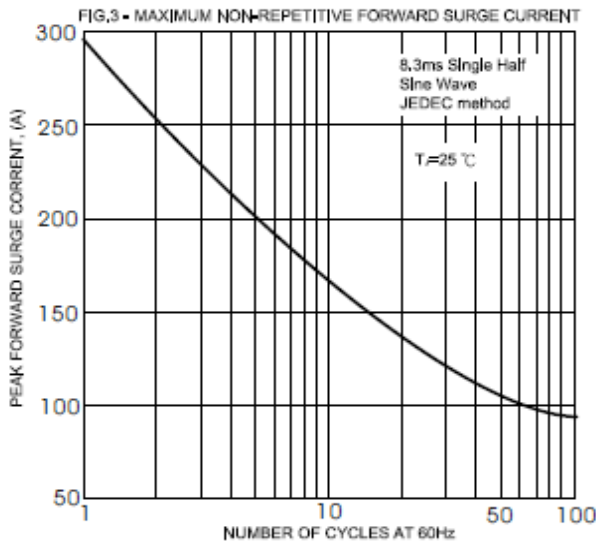
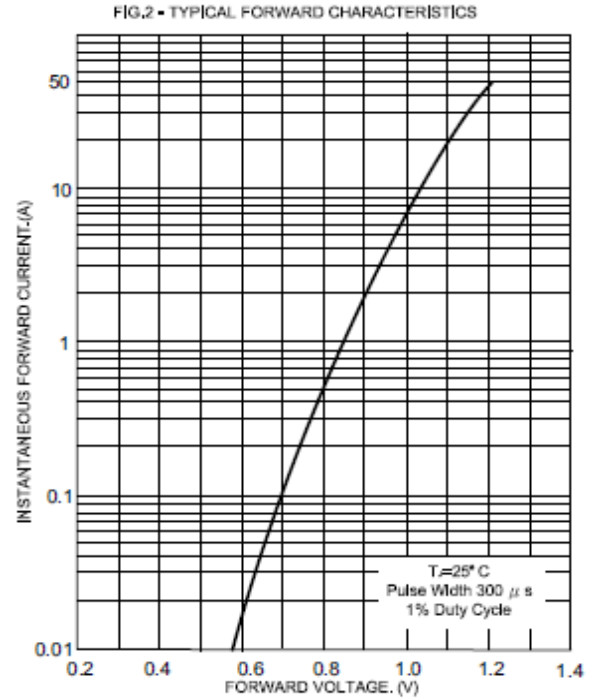
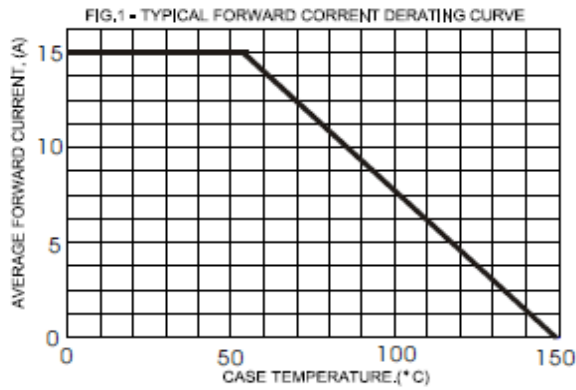
| Parameter | Symbol | Conditions | KBPC15005T/W | KBPC1501T/W | KBPC1502T/W | KBPC1504T/W | Unit |
|---|-----------|---|--------------|-------------|-------------|-------------|---------------|
| Maximum average forward rectified current | I_O | $T_c = 55\text{ }^\circ\text{C}$ | 15 | 15 | 15 | 15 | A |
| Peak forward surge current | I_{FSM} | 8.3 ms half sine-wave | 300 | 300 | 300 | 300 | A |
| Maximum instantaneous forward voltage per leg | V_F | $I_F = 7.5\text{ A}$ | 1.1 | 1.1 | 1.1 | 1.1 | V |
| Maximum DC reverse current at rated DC blocking voltage per leg | I_R | $T_c = 25\text{ }^\circ\text{C}$ $T_c = 100\text{ }^\circ\text{C}$ | 5 500 | 5 500 | 5 500 | 5 500 | μA |
| Typical junction capacitance ¹ | C_j | | 300 | 300 | 300 | 300 | pF |

Thermal characteristics

| | | | | | | | |
|---|-----------------|--|-----|-----|-----|-----|--------------------|
| Typical thermal resistance ² | $R_{\theta JC}$ | | 2.3 | 2.3 | 2.3 | 2.3 | $^\circ\text{C/W}$ |
|---|-----------------|--|-----|-----|-----|-----|--------------------|

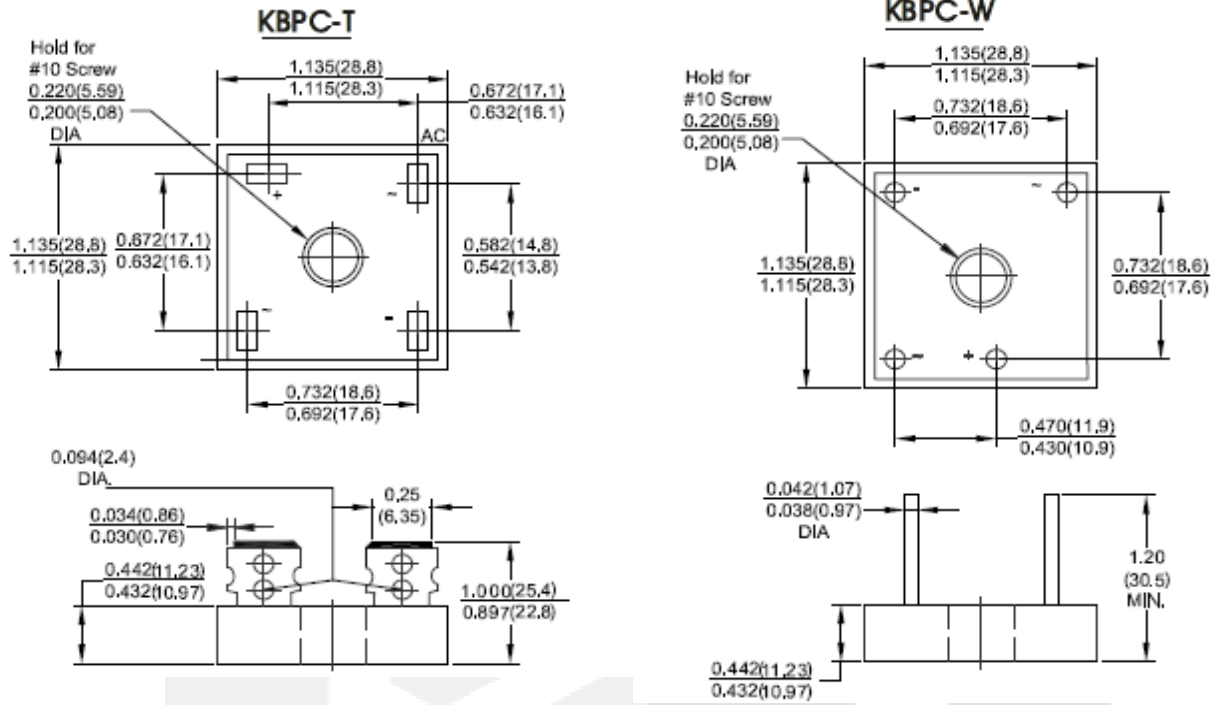
¹ - Measured at 1 MHz and applied reverse voltage of 4.0 V D.C.

² - Device mounted on 300 mm x 300 mm x 1.6 mm Cu plate heatsink

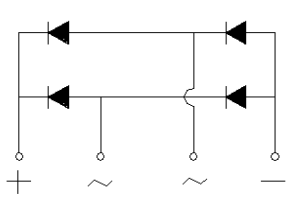


Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



Dimensions in inches and (millimeters)



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